MEETING PROCEEDINGS
2015 SICPRE Congress Young Plastic Surgeon Best Abstracts

Surgical Treatment of Frontal and Occipital Migraines: A Comparison of Results

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BACKGROUND

The World Health Organization ranked migraine as the 19th worldwide disease causing disability.[1,2] Surgical resection of forehead and/or occipital muscles has been related to the relief of migraine; indeed, inflammation and hyperexcitability of peripheral craniofacial nerves due to local compression might constitute a trigger for this pathology.[3–5]

METHODS

We performed a retrospective comparison between 2 surgical procedures: our modified technique of selective endoscopic myotomies of corrugator supercilii, depressor supercilii, and procerus muscles[6–8] for frontal migraine (group A) versus the surgical isolation of the greater and the lesser occipital nerves for disease originating on the posterior region (group B). Both procedures were performed under local anesthesia as 1-day surgery. Group A was constituted by 43 patients who, after a 1.5-cm long midline scalp incision (Fig. 1) and subgaleal dissection, underwent selective myotomies and decompression of the supraorbital and supratrochlear nerves. In group B, 22 patients, after an 8-cm-long scalp incision along the superior nuchal midline (Fig. 2) and dissection of local muscles, underwent release of the greater and the lesser occipital nerves by ligation of the (usually dilated) occipital vascular bundles. For both groups, follow-up ranged from 6 to 24 months.

RESULTS

In group A, 93.3% of the patients reported a positive response to the surgery (33.3% complete elimination of disease and 60% significant improvement), whereas 6.6% did not notice any change in symptoms. In group B, 92.3% of the patients obtained a positive response (84.6% complete relief from symptoms and 7.7% a significant reduction), whereas in 7.7% of the patients no improvement was noticed.

CONCLUSIONS

In summary, the surgical procedure performed in group B led to significantly better results (84.6%

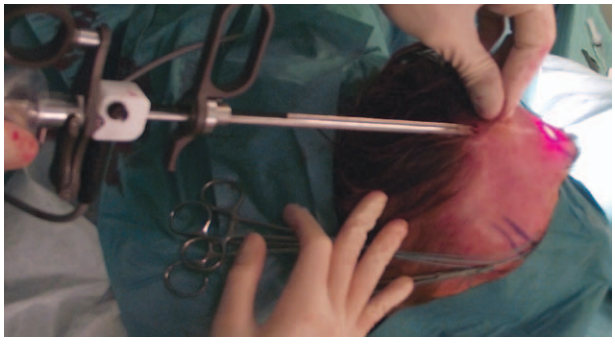

Fig. 1. Endoscopic procedure for the treatment of frontal migraine.

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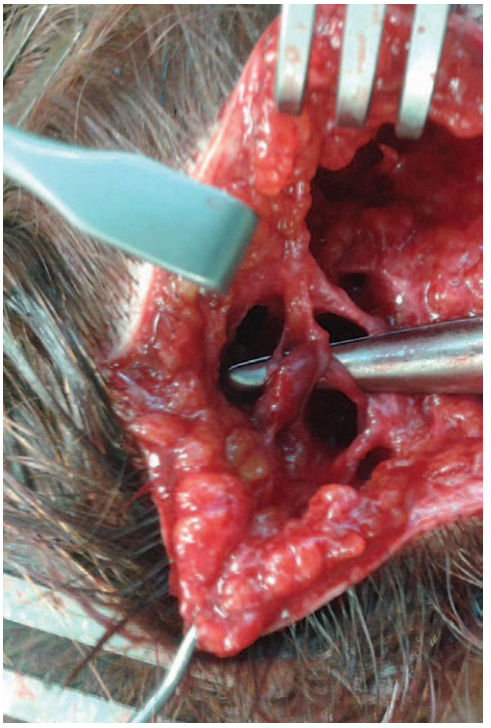

Fig. 2. In surgical treatment of occipital migraine, after subcutaneous and muscular dissection, the greater occipital nerves running below the occipital artery are shown (scissors).

versus 33.3%) when taking into account complete healing rates. These results might be due to the fact that frontal migraine is caused by muscular local compression of the nerves, which sometimes relapse because neo-formed scar tissue might compress the nerves again, whereas in occipital migraine (provoked mainly by the compression determined by dilated arterial vessels: occipital artery) after occipital artery resection combined with myotomies, the trigger points were no longer overstimulated.

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